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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/815,792	04/02/2004	Jac-Bon Koo	6161.0121.US	9923
58027 7590 03/06/2007 H.C. PARK & ASSOCIATES, PLC 8500 LEESBURG PIKE SUITE 7500 VIENNA, VA 22182			EXAMINER WON, BUMSUK	
			ART UNIT	PAPER NUMBER
			2879	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		03/06/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/815,792

Applicant(s)

KOO ET AL.

Examiner

Bumsuk Won

Art Unit

2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 December 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 and 3-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3,5-8 and 10 is/are rejected.
- 7) ☒ Claim(s) 4 and 9 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Response to Amendment***

The amendment filed on 12/12/2006 has been entered.

### ***Response to Arguments***

Applicant's arguments regarding claims 1, 3, 5-8, and 10 filed on 12/12/2006 have been fully considered but they are not persuasive.

On pages 7-9 of remarks, rejections under 35 USC 102, the Applicant argues that the rejection of claim 1 must be withdrawn because Sarma fails to disclose every claimed feature in claim 1. The Applicant points out that Sarma's drain elements 734, 744, 754, and 764 are not the drain regions but drain electrodes.

The Examiner respectfully agrees that Sarma's drain elements are not specifically the drain regions only, however the drain elements of 734, 744, 754, and 764 are the drain electrodes as well as the drain regions since drain electrodes without drain regions would not properly function as TFTs.

Applicant's arguments regarding claims 4 and 9, filed on 12/12/2006 have been fully considered and are persuasive. The rejection under 35 USC 103 of claims 4 and 9 has been withdrawn.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claims 1, 3, and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Sarma (5,204,659).**

**Regarding claim 1**, Sarma discloses a flat display (figs 4 and 7) comprising: pixels including RGB unit pixels (fig 4, RGB, fig 7, 73-76), each unit pixels include a transistor with source/drain regions (733, 743, 753, 763 for source, 734, 744, 754, 764 for drain), wherein transistors of RGB unit pixels have drain regions different geometric structures (734, 744, 754, 764 all have different structures).

**Regarding claim 3**, Sarma discloses the drains have different width (w1, w2, w3, w4, vertical dimension looking at the figure) but same length (horizontal dimension looking at the figure).

**Regarding claim 5**, Sarma discloses the unit pixels include LCD driven by the transistor (figs 2-12). The claim limitation from 2<sup>nd</sup> line, “a drain region of a transistor to drive the light emitting device ... lower luminous efficiency” is drawn to a functional claim limitation which is incidental to the claimed apparatus. It is well established that a claimed apparatus cannot be distinguished over the prior art by a functional claim limitation. Consequently, absent a showing of an unobvious difference between the claimed product and the prior art, the subject functional claim limitation is not afforded patentable weight (MPEP 2114).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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**Claim 6-8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sarma (5,204,659) in view of Yamada (JP 2001-109399).**

**Regarding claim 6,** Sarma discloses all the claimed limitations except for the drain regions including offset regions having different geometric structures from one another, respectively.

Yamada discloses the drain regions (43c, 43d) of the transistors include offset regions (43c) having different geometric structures from one another, respectively (paragraphs 37-41), for the purpose of differentiate luminous efficiency of each unit pixel.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the transistors include offset regions having different geometric structures from one another, respectively disclosed by Yamada in the display disclosed by Sarma, for the purpose of differentiate luminous efficiency of each unit pixel.

**Regarding claim 7,** Yamada discloses each unit pixel includes an organic EL device (60) driven by the transistor (paragraph 33), and a drain offset region (43c) of a transistor to drive the organic EL device having the highest luminous efficiency of the organic EL device among the transistors in the unit pixels has a narrower width compared to widths of drain offset regions of transistors to drive organic EL device having a relatively lower luminous efficiency (paragraphs 37-41). The reason for combining is same as claim 6.

**Regarding claim 8,** Yamada discloses the drain offset regions (43c) of the transistors of the R, G and B unit pixels are of a construction having a same length and a different width from one another (paragraphs 40-41). The reason for combining is same as claim 6.

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**Regarding claim 10**, Yamada discloses each unit pixel includes an organic EL device (60) driven by the transistor (paragraph 33), and channel layers (43c) of the transistors controlling currents supplied to the organic EL device of the unit pixels are of same size (paragraphs 37-41, each R, G and B will have its own size which are same size within each R, G and B). The reason for combining is same as claim 6.

***Allowable Subject Matter***

Claims 4 and 9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The following is a statement of reasons for the indication of allowable subject matter:

**Regarding claim 4**, the prior art of record does not teach or suggest the invention of a flat panel display having drain regions of the transistors of R, G, and B unit pixels being zigzag shapes, along with other claimed limitations.

**Regarding claim 9**, the prior art of record does not teach or suggest the invention of a flat panel display having drain offset regions of the transistors of R, G, and B unit pixels being zigzag shapes, along with other claimed limitations.

***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after

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the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

***Contact information***


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bumsuk Won whose telephone number is 571-272-2713. The examiner can normally be reached on Monday through Friday, 8:00 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar Patel can be reached on 571-272-2457. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Bumsuk Won  
Patent Examiner



JOSEPH WILLIAMS  
PRIMARY EXAMINER